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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/790,591	03/01/2004	Hamilton Wong	50099-00002	9193

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Marsh Fischmann & Breyfogle LLP  
Suite 411  
3151 South Vaughn Way  
Aurora, CO 80014

EXAMINER

KRUER, KEVIN R

ART UNIT PAPER NUMBER

1773

DATE MAILED: 02/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/790,591

**Applicant(s)**

WONG, HAMILTON

**Examiner**

Kevin R. Kruer

**Art Unit**

1773

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) 28-34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03/04 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 5/2/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Election/Restrictions***

1. Applicant's election of Group I, claims 1-27, in the reply filed on October 24, 2005 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).
2. Claims 28-34 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on October 24, 2005.

***Information Disclosure Statement***

3. The information disclosure statement filed 5/2/2005 has been fully considered. An initialed copy of said PTO-1449 is enclosed herein.

***Drawings***

4. The drawings filed 3/1/2004 are accepted.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-9, 11,12,15-22, 24, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gonczy et al (US 5,143,770) in view of Murata et al (US 2003/0039848A).

Gonczy teaches a multilayer insulation blanket (abstract). The blanket comprises successive layers of thermally reflective materials and spacer materials (col 6, lines 4+). The thermally reflective material is a polyester, polyamide, polyimide or polyolefin film wherein both surfaces of said film are metallized with aluminum, gold, or silver (col 6, lines 4+). Said thermally reflective materials are herein understood to read on the claimed "outer sheet of thermally insulative plastic material" and "at least one inner sheet of thermally insulative plastic material." The spacer materials are spunbonded polyester. Said layers are herein understood to be "coextensive with one another (see Fig 4)."

Said layer is understood to be fully capable of being "attachable to spacecraft" and "attachable on a structure intended for use in a vacuum condition" and it, therefore, is understood to meet said conditions. MPEP 2111.02 states that a preamble is not considered a limitation and is of no significance to claim construction when the preamble merely states the purpose or intended use of the invention.

Gonczy does not teach a coating of anti-contaminant material should be placed over the outer sheet of thermally reflective material. However, Murata teaches a photocatalyst material for metallic substrates comprising a titanium oxide layer and a protective layer containing lithium silicate between the substrate and the layer of photocatalyst (abstract). Said photocatalyst is effective for inducing the breakdown of

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organic residues on said outer surface of a material in the presence of solar radiation (0002). Herein the titanium oxide is understood to read on the claimed photocatalytic material of claim 6 and the lithium silicate is understood to read on the high emittance glass layer of the claims 11 and 12. Thus, it would have been obvious to apply the layers taught in Murata to the outwardly facing metallized layer of the insulative blanket taught in Gonczy. The motivation for doing so would have been to induce the breakdown of organic residues on said outer surface of the thermally insulative plastic material in the presence of solar radiation.

7. Claims 13, 14, 25, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gonczy et al (US 5,143,770) in view of Murata et al (US 2003/0039848A), as applied to claims above, and further in view of WO02/055612 (herein referred to as Yoshihara). US 6,949,284 is herein relied upon as an English translation of Yoshihara.

Gonczy in view of Murata is relied upon as above, but does not teach the laminate may further comprise an indium tin oxide or indium oxide layer on the photocatalytic layer or between said layer and the lithium silicate layer. However, Yoshihara teaches the bonding between a binder layer and a photocatalytic layer may be deteriorated by the photocatalytic action (col 11, lines 35+). In order to combat said problem, the photocatalyst may be coated with indium tin oxide or indium oxide (col 11, lines 35+). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to coat the photocatalyst taught by Murata with ITO or

indium oxide. The motivation for doing so would have been to maintain a strong bond between the photocatalyst and the lithium silicate.

8. Claims 10 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gonczy et al (US 5,143,770) in view of Murata et al (US 2003/0039848A), as applied to claims above, and further in view of Herd et al (US 5,651,251).

Gonczy in view of Murata is relied upon as above, but does not teach the spacers may comprise the claimed mesh. However, Herd teaches thermal shields typically comprise metallized composite films intervened with glass or nylon mesh spacer layers, as is known in the art (col 4, lines 12+). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize glass or nylon mesh as the spacer layers of the laminate taught in Gonczy. The motivation for doing so would have been that said meshes are known in the art to be functionally equivalent to the polyester spunbonded fibers taught in Gonczy.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin R. Kruer whose telephone number is 571-272-1510. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kevin R. Kruer  
Patent Examiner-Art Unit 1773